

RCA Institutes, Inc
132 West 31st Street | New York, NY 10001



RCA

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INTERLOCKING SYS CO
T NELSON-SYS CONSULTNT
BOX 1546
POUGHKEEPSIE NY 12603



Bradford I. Daggett
Director
Institute for
Professional Development

Dear Engineer:

Do you know how to utilize, evaluate, and specify monolithic or hybrid devices? These are critical factors, if you are going to stay in the mainstream with Integrated Circuits.

The technology of integrated circuits is increasing at an alarming rate.

You are not alone if you are finding it difficult to do productive design work and at the same time, keep up with this rapidly advancing field.

We believe we can increase your productivity by providing you with a firm grasp of many of the latest engineering techniques in integrated circuits.

Our experienced staff searches industry for 'what's happening' in this vital field. They read for you the voluminous periodicals, digest the information, evaluate it and lucidly present it in INTEGRATED CIRCUITS.

INTEGRATED CIRCUITS is a five-day seminar presented by the Institute for Professional Development and you're invited to attend.

The overall questions this seminar undertakes to answer for you are:

What are the salient features of monolithic and film technology which I need to know as an Applications and Design Engineer?

How can I evaluate standard Integrated Circuits?

What performance should I expect from Integrated Circuits?

Under what conditions should I consider large-scale integration?

What are some of the common defects in Integrated Circuits, and how can I detect them?

What types of Integrated Circuits are available today?

THE SEMINAR

This is a seminar for engineering personnel. The suggested prerequisite, based on depth and pace, is a bachelor's degree in engineering, science or the equivalent in experience. It will be expected that you have an understanding of semiconductor theory, electrical networks and amplifier circuits.

You will work from a set of lecture materials specifically prepared for the seminar. This design minimizes your note taking thus permitting you to devote your full attention to the presentation.

It will be a week of hard work, but we feel that you will find it interesting and rewarding.

BACKGROUND OF THE INSTITUTE

The Institute for Professional Development is part of RCA Institutes, one of the oldest and largest schools of its kind in the United States.

High level seminars are offered in both the technical and managerial professions by the Institute for Professional Development. In the technical field, its goal is to increase the proficiency of engineering personnel by providing information and techniques that are of immediate value. This is accomplished through vertical educational programs of high intensity offering depth to the subject while emphasizing the practical application of various engineering techniques.

It would be hard to find a blue-chip corporation from A T & T to Xerox, which has not turned to RCA Institute for Professional Development for special training of its people.

SCHEDULE

The action starts on Monday and continues daily through Friday from 8:30 a.m. to 4:30 p.m.

A handy reference flier has been enclosed as a travel and reservation guide which also details, for you, the location and dates.

REGISTRATION INFORMATION

Because of the personalized type instruction, we are forced to limit registrations.

We will accept applications in order of receipt, first come/first served. For this reason, we suggest you apply immediately.

The fee is \$425.00 and includes your attendance, lecture materials and luncheons. A group rate of \$350.00 per enrollee is available to five or more enrollments received at the same time.

In conclusion, let me repeat. Integrated Circuits is a rapidly advancing field. Are you keeping up?

Our files contain many letters from past attendees acclaiming the value of this seminar to them. We believe, we can also help you.

Phone us or mail the enclosed application today.

Sincerely,

RCA INSTITUTES, INC.

B. I. Daggett

Bradford I. Daggett, Director
Institute for Professional
Development

Integrated Circuits

The lecture notes total 168 printed pages and are available only to participants.

The Planning Board

This seminar has been developed through extensive field research by the Institute for Professional Development in consultation with RCA Institutes' Board of Technical Advisers, representing various technical research and educational activities of RCA and its subsidiaries.

The People that Make it Happen . . .

B. I. Daggett	Director
J. H. Sneddon	Manager, Administration
D. B. Kenney	Industrial Sales
B. V. Ferguson	Direct Marketing
M. V. Mahoney	Research & Development
A. B. Peticolas	Administrator
C. H. Saville	Group Leader
R. D. Lindskog	Staff Member
R. H. Rogers	Staff Member
B. J. Robinson	Staff Member
G. H. Schlitt	Staff Member
K. D. Orphanides	Staff Member

Each lecturer is dedicated to the profession—has engineering experience and is an accomplished teacher. His full-time job includes researching, assembling and presenting material in an effective manner.

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Institute for Professional Development
132 West 31st Street
New York, New York 10001

Please reserve a place for me at your five-day seminar on INTEGRATED CIRCUITS at _____

My understanding is that the registration fee of \$425.00 includes attendance, materials and luncheons. A group rate of \$350.00 per person is available to five or more enrollments submitted at the same time.

Name _____

Firm _____

Address _____

Zip Code _____

Title _____

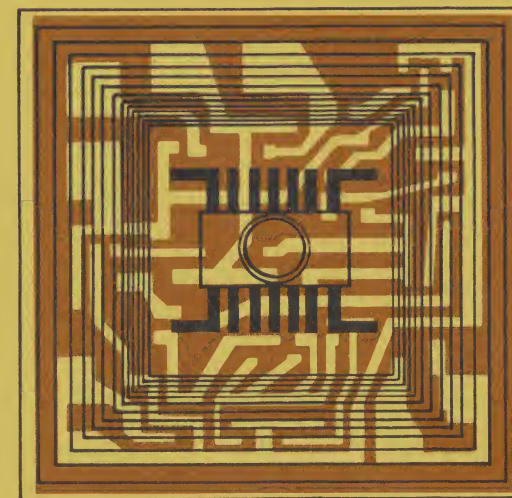
☐ Enclosed is my check

☐ Please bill my firm

I should like to bring along _____ of my key men, subject to the rates and prerequisites quoted in this folder.

You'll find their names and titles in the attached memo.

Integrated Circuits



A Syllabus on the Content of

Integrated Circuits

A Five-day Educational Seminar
For Engineers Presented by
RCA Institutes

Integrated Circuits

The Purpose of the Seminar:

1. To present you with those aspects of monolithic and film technology that are of direct value in the design and application of Integrated Circuits.
2. To clarify the differences between Integrated Circuits and their discrete component counterparts.
3. To help you decide what types of Integrated Circuits to use for a particular function.
4. To acquaint you with the performance to be expected from the different types.
5. To teach how to read and understand the various specifications and application sheets on Integrated Circuits.
6. To train you in the application to both linear and digital requirements.
7. To give an overview of the types of Integrated Circuits available in the field today.
8. To examine and identify common defects in Integrated Circuits.
9. To provide, in a concentrated form, the training necessary to achieve practical engineering design in the field of Integrated Circuits.

The Program

The key words are: utilization, specification and evaluation. This is a seminar for engineers who must utilize, specify or evaluate monolithic or hybrid devices.

The program will be presented to you in a rapid but interesting pace utilizing visual aids, exercises, and lecture.

In fact, special lecture notes have been prepared to relieve you of much of the burden of note-taking. In just five days, you will reap the rewards of our extensive R & D efforts.

The level and intensity of this seminar requires that you have a bachelor's degree in engineering or science or the equivalent in experience. Familiarity with semiconductor theory, electrical networks and amplifier circuits is highly desirable.

A glance at the actual topics (below) contained in our lecture notes will give you an idea of the program we have planned for you.

Topic Outline

1st Day:

Thick and thin film technology; silicon monolithic wafer processing; interconnect considerations; impurity diffusion and junction formation; integrated transistors, resistors, capacitors and diodes along with their parasitic elements; dielectric isolation and hybrid circuits.

2nd Day:

Device considerations for standard integrated packages; monolithic design guidelines; circuit evaluation and circuit reliability of commercially available IC samples; standard packages; large scale integration; suitable linear IC configurations, differential amplifiers and linear IC specifications, operational IC amplifiers.

3rd Day:

Stability considerations of linear IC's, phase compensation and compensation methods; protective circuits for IC's; universal linear circuits; broadband and narrow band IC amplifiers; Schmitt triggers; junction FETS, pinch off resistors, MOSFETS and complementary MOS structures.

4th Day:

Digital package characteristics, specification and measurement of digital IC's; logic symbology and standards, transfer characteristics, speed power and temperature considerations, integral digital design philosophy, saturating and nonsaturating logic circuits.

5th Day:

Logic connectives; IC output stages; analysis of major logic families, RTL, DTL, T²L, CML, ECL, HTL in integrated form; interfacing criterions, wired "or" connections; analysis of commercially available circuits; noise immunity; force fitting of standard digital devices; integrated flip-flops.

Seminar Location



We have chosen the site of the Holiday Inn of Waltham for the presentation of our seminar, Integrated Circuits.

The Holiday Inn, located in Waltham, Mass. with complete facilities designed to ensure your comfort and meet your needs, is located at:

Totten Pond Road at Rt. 12
Waltham, Mass.

For room reservations, call the hotel directly.
Telephone (617) 899-3000

Remember the dates:

December 2-6, 1968
8:30 a.m. to 4:30 p.m.

Telephone answering service will be provided during seminar hours.

RCA

Registration Information

Registration Policy . . .

Seminars will be limited in size, and registrations will be accepted in the order received. Substitution of applicants may be made any time prior to the opening of the seminar. Additional registration information may be obtained by phoning our registrar's office – (212) 689-7200 extension RR 884. Tentative registrations will be accepted by phone with space being reserved until the necessary paper work can be completed.

Cancellation Policy . . .

Cancellation of registration will be honored and entire fee refunded, if written notification is received no later than two weeks prior to the seminar. A fee of \$25.00 will be charged for other cancellations.

Registration Fee . . .

Registration fee of \$425.00 includes attendance, luncheons, coffee breaks and a complete package of reference material. The reference material will be issued at the opening session and is available only to seminar participants. A group rate of \$350.00 per participant is offered for five or more enrollments submitted together.

Hotel Accommodations . . .

RCA Institutes has reserved a block of rooms in each seminar hotel. Your hotel room is not included in the registration fee. Please arrange your own room accommodations directly with the hotel, with reference to RCA Institutes' seminar.

REQUEST FOR SEMINAR REGISTRATION(S)

To: RCA INSTITUTES, Inc.

Institute for Professional Development

132 West 31st Street, New York, N.Y. 10001

REGISTRATION RATE FOR 5-DAY SEMINAR: \$425.00

INTEGRATED CIRCUITS 

BOSTON, MASS.

DECEMBER 2-6, 1968

☐ Purchase Order Enclosed

☐ Check Enclosed

☐ Bill Company

☐ Bill Me

Please register the following persons for the seminar, indicated above.

NAME _____

TITLE _____

NAME _____

TITLE _____

NAME _____

TITLE _____

AUTHORIZED BY _____

signature

title

FIRM'S NAME AND ADDRESS _____

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Please make checks payable to RCA Institutes, Inc.

A partial list of the companies that have sent personnel to attend our seminars

Aerospace Corporation
American Machine and Foundry Co.
The Bendix Corp.
Bell Telephone Laboratories, Inc.
The Boeing Company
Brown Engineering Co. Inc.
Chevron Research Co.
Colgate-Palmolive Co.
Columbia Broadcasting System, Inc.
Continental Oil Co.
Corning Glass Works
Douglas Aircraft Co. Inc.
E. I. DuPont DeNemours & Co.
Eastman Kodak Co.
Electronic Communications Inc.
Fairchild Camera and Inst. Corp.
Ford Motor Company
General Dynamics Electronics
General Electric Co.
General Motors Corp.
General Instrument Corp.
General Precision Equipment Corp.

Grumman Aircraft Engineering Corp.
Hamilton Standard
Hazeltine Corp.
Honeywell Inc.
ITT-Gilfillan Inc.
Johns Hopkins University
Jarrell-Ash Company
Leeds & Northrup Co.
Lockheed California Co.
The Magnavox Company
McDonnell-Douglas Corporation
Motorola Semiconductor Products Division
MIT
North American Aviation Inc.
North Electric Co.
Pan American World Airways
Philco-Ford
Pitney-Bowes, Inc.
Procter & Gamble Co.
RCA
Raytheon Co.
Rockwell Manufacturing Co.

The Ryan Aeronautical Co.
Shell Development Company
The Singer Co.
Sperry Rand Corp.
Sundstrand Aviation
Sylvania
Teletype Corporation
Texaco Research Labs.
The Budd Co.
The Mitre Corp.
United Air Lines
United Aircraft Corp.
Uniroyal Chemical Co.
University of California
Varian Associates
Westinghouse Electric Corp.
Western Electric Co.
The Western Union Telegraph Co.
Western Electric Co. Inc.
Xerox Corporation

... and many, many others